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CLAIMS

What is claimed is:

- A compound selected from compounds 8-a through 8-s, as
 shown in Table 8.
 - 2. An organic electronic device comprising at least one active layer between two electrical contact layers, wherein the at least one active layer comprises at least one compound selected from compounds 8-a through 8-s, as shown in Table 8.
 - 3. The device of Claim 2 wherein the active layer is a light-emitting layer.
 - 4. The device of Claim 2 wherein the active layer is a charge transport layer.
- 5. An organic electronic device comprising an emitting layer having an emission maximum in the range of 570 to 700 nm, wherein at least 20% by weight of the emitting layer comprises at least one compound having a Second Formula below:

where:

y is 1;

z is 0:

L' is a bidentate ligand, and is not a phenylpyridine, phenylpyrimidine, or phenylquinoline;

L^a and L^b are alike or different from each other and each of L^a and L^b has a structure selected from structure (XI) and structure (XII) below:

$$R_{18}$$
 R_{19}
 R_{16}
 R_{10}
 R_{11}
 R_{12}
 R_{13}
 R_{15}
 R_{14}
 R_{14}
 R_{15}

30 where:

at least one of R_{10} through R_{19} is selected from F, C_nF_{2n+1} , OC_nF_{2n+1} , and OCF_2X , where n is an integer from 1 through 6 and X is H, Cl, or Br;

$$\begin{array}{c|c} R_{28} & R_{21} \\ \hline R_{28} & R_{21} \\ \hline R_{27} & \hline \\ R_{29} & \hline \\ R_{30} & R_{26} \end{array} \tag{XII}$$

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where:

at least one of R_{21} through R_{30} is selected from F, C_nF_{2n+1} , OC_nF_{2n+1} , and OCF_2X , where n is an integer from 1 through 6 and X is H, Cl, or Br.

6. An organic electronic device comprising an emitting layer having an emission maximum in the range of 570 to 700 nm, wherein at least 20% by weight of the emitting layer comprises at least one compound having a Third Formula below:

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(Third Formula)

where:

L^a, L^b, and L^c are alike or different from each other and each of L^a, L^b, and L^c has a structure selected from structure (XI) and structure (XII) below:

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$$R_{18}$$
 R_{19}
 R_{16}
 R_{10}
 R_{11}
 R_{12}
 R_{13}
 R_{15}
 R_{14}
 R_{14}
 R_{15}

wherein:

at least one of R_{10} through R_{19} is selected from F, C_nF_{2n+1} , OC_nF_{2n+1} , and OCF_2X , where n is an integer from 1 through 6 and X is H, Cl, or Br;

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$$R_{28}$$
 R_{21}
 R_{27}
 R_{24}
 R_{29}
 R_{30}
 R_{26}
 R_{26}
 R_{25}
 R_{26}
 R_{26}
 R_{26}

wherein:

at least one of R_{21} through R_{30} is selected from F, C_nF_{2n+1} , OC_nF_{2n+1} , and OCF_2X , where n is an integer from 1 through 6 and X is H, Cl, or Br.

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- 7. A compound selected from compounds 9-a through 9-l, as shown in Table 9.
- 8. An organic electronic device comprising an emitting layer having an emission maximum in the range of 450 to 500 nm, wherein at least 20% by weight of the emitting layer comprises at least one compound having a Sixth Formula below:

IrLaLbL'L" (Sixth Formula)

20 where

L' is selected from a phosphine, an isonitrile, and carbon monoxide;

L" is selected from F, Cl, Br, and I; La and Lb have structure (I) below,

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$$R_7$$
 R_9
 R_5
 R_1
 R_2
 R_3
 R_4
 R_3
 R_4

wherein:

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- R₁ through R₈ are independently selected from alkyl, alkoxy, halogen, nitro, cyano, fluoro, fluorinated alkyl and fluorinated alkoxy groups, and at least one of R₁ through R₈ is selected from F, C_nF_{2n+1}, OC_nF_{2n+1}, and OCF₂X, where n is an integer from 1 through 6 and X is H, Cl, or Br, and A is C.
- 9. The device of Claim 8 wherein L" is Cl, and L' is selected from triphenylphosphine; tris[3,5-bis(trifluoromethyl)phenyl]phosphine; 2,6-dimethylphenyl isocyanide; 3-trifluoromethylphenyl isocyanide; and 4-toluenesulfonylmethyl isocyanide.
 - 10. The device of Claim 8, wherein the compound is selected from compounds 9-a through 9-l, as shown in Table 9.
 - 11. A compound selected from compounds 12-a through 12-j as shown in Table 12.